

**What Is Claimed Is:**

1. An iron-based casting alloy, comprising:  
an iron matrix having primary carbides (MC) selected  
from the group consisting of vanadium carbides, niobium  
5 carbides, titanium carbides, and combinations thereof  
with substantially no eutectic carbides thereof; and  
eutectic chromium carbides ( $M_7C_3$ ) that form with  
substantially no primary chromium carbides.

2. An alloy as in claim 1 further including  
10 proeutectic austenite.

3. A process for making an iron-based  
casting alloy, comprising: precipitating in an iron  
matrix primary carbides (MC) of the group consisting of  
vanadium carbides, niobium carbides, titanium carbides,  
15 and combinations thereof; forming eutectic chromium  
carbides ( $M_7C_3$ ) and eutectic austenite without forming  
any substantial amount of primary chromium carbides.

4. A process as in claim 3 wherein  
proeutectic austenite is precipitated before forming the  
20 eutectic chromium carbides and eutectic austenite.